ELSEVIER

Journal of Electron Spectroscopy and Related Phenomena 86 (1997) v–vi

JOURNAL OF ELECTRON SPECTROSCOPY and Related Phenomena

Contents

Special Issue dedicated to the late Theo Thole

Preface 1

Introduction 5

Letter 7

Theo Thole, an unusual man
W.C. Nieuwpoort (Groningen, The Netherlands) 9

Theo and the Greenhouse Effect
J. Kommandeur (Groningen, The Netherlands) 13

Theo Thole as a Ph.D. "student"
P.Th. van Duijen (Groningen, The Netherlands) 17

Theo Thole at ESRF, 1990–1996: a personal appreciation
M. Altarelli (Grenoble, France) 23

Collected works of Theo Thole: the spectroscopy papers
F. de Groot (Groningen, The Netherlands) and G. van der Laan (Warrington, UK) 25

Theory of simple spectra
G. van der Laan (Warrington, UK) 41

Thole's interacting polarizability model in computational chemistry practice
A.H. de Vries (Warrington, UK), P.Th. van Duijnen, R.W.J. Zijlstra and M. Swart (Groningen, The Netherlands) 49

Anisotropic branching ratio in X-ray absorption spectra
G. van der Laan (Warrington, UK) and B.T. Thole (Groningen, The Netherlands) 57

Interplay between intra-atomic multiplet coupling and interatomic hybridization in core-level spectroscopy
A. Kotani and H. Ogasawara (Tokyo, Japan) 65

The 3d–4f exchange interaction, X-ray second-order optical processes and the magnetic circular dichroism spin sum rule in rare earths
T. Jo (Higashi-Hiroshima, Japan) 73

Influence of the band shapes in the Anderson impurity model
F. Jollet, V. Ortiz and J.P. Crocombette (Gif-sur-Yvette, France) 83

Orientation effects in soft X-ray magnetic circular dichroism
J. van Elp (Aarhus, Denmark) and B.G. Searle (Warrington, UK) 93

Fe $L_{2,3}$ linear and circular magnetic dichroism of Fe_3O_4
P. Kuiper (Uppsala, Sweden), B.G. Searle (Christchurch, New Zealand), L.C. Duda (Uppsala, Sweden), R.M. Wolf and P.J. van der Zaag (Eindhoven, The Netherlands) 107

Soft X-ray magnetic circular dichroism study of the colossal magnetoresistance compound $La_{1-x}Sr_xMnO_3$
E. Pellegrin, L.H. Tjeng, F.M.F. de Groot, R. Hesper, G.A. Sawatzky (Groningen, The Netherlands) Y. Moritomo and Y. Tokura (Tsukuba, Japan) 115

Core-level photoemission spectra of low-dimensional copper-oxide systems
K. Okada (Yamaguchi, Japan) and A. Kotani (Tokyo, Japan) 119

Theo Thole and the graphical methods
C. Brouder (Paris, France) and G. Brinkmann (Bielefeld, Germany) 127

Magnetic operators for Ti^{3+} and Cu^{2+} ground states
P. Sainctavit (Paris, France) 133

Sum rules for X-ray absorption and dichroism
P. Carra (Grenoble, France) 139

Soft X-ray fluorescence yield XMCD sum rules
J.B. Goedkoop, N.B. Brookes, M. van Veenendaal and B.T. Thole (Grenoble, France) 143

Branching ratios of the circular dichroism at rare earth L_{23} edges
M. van Veenendaal, J.B. Goedkoop and B.T. Thole (Grenoble, France) 151

X-ray resonant Raman scattering from $Gd_3Fe_5O_{12}$
M.H. Krisch, F. Sette, C. Masciovecchio and R. Verbeni (Grenoble, France) 159
Magnetic phase diagram of an amorphous Er–Fe alloy studied by X-ray magnetic circular dichroism
S. Pizzini, L.M. García, A. Fontaine, J.P. Rueff, J. Vogel, R.M. Galéra, J.B. Goedkoop, N.B. Brookes (Grenoble, France), G. Krill and J.P. Kappler (Orsay, France) 165
Bioinorganic applications of X-ray multiplets — The impact of Theo Tholes's work
S.P. Cramer, C.Y. Ralston (Davis, CA, USA), G. Meigs, C. Bryant, H.-x. Wang (Berkeley, CA, USA) 175
Non-local electronic effects in core-level photoemission, UV and optical electronic absorption spectra of nickel oxides
M. Atanasov (Sofia, Bulgaria) and D. Reinen (Marburg, Germany) 185
Cr magnetic moments in Fe–Cr layered structures
D. Knabben, Th. Koop (Düsseldorf, Germany), H.A. Dürr (Warrington, UK), F.U. Hillebrecht (Düsseldorf, Germany) and G. van der Laan (Warrington, UK) 201

Author Index 209

Subject Index 211